BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 80-251-E - ORDER NO. 85-347

August 2, 1985

IN RE:	Small Power Production and Cogeneration Facilities - Implementation of Section 210 of the Public Utility Regulatory Policies Act of 1978.	ORDER

I.

INTRODUCTION

This matter comes before the Public Service Commission of South Carolina (hereinafter "the Commission") by way of the operation of certain provisions of Section 210 of the Public Utility Regulatory Policies Act of 1978 (hereinafter "PURPA")[1], certain rules and regulations promulgated thereunder.

Section 210 of PURPA, inter alia, directed the Federal Energy Regulatory Commission (hereinafter "the FERC") to prescribe rules designed to encourage cogeneration and small power production by requiring certain affected electrical utilities to offer both to sell electric energy to qualifying

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[1] Pub. L. 95-617, 92 Stat. 3117 et seq. 19 U.S.C. Sections 2601 et seq. (1978).

cogeneration facilities[2] and qualifying small power production facilities[3] (hereinafter collectively referred to as "qualifying facilities" or "QF's") and to purchase electric energy from such qualifying facilities. In 1980, the FERC issued certain rules pursuant to Section 210 which defined the requirements for the qualifications of qualifying facilities and delineated the guidelines for the determination of the special rates and terms

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[2] The final Section 210 regulations do not define this term. The reader is referred to the final regulations promulgated under Section 201 of PURPA. In order to qualify, the cogeneration facility must satisfy certain operation and efficiency standards as established in 18 C.F.R. Section 292.205. Upon certain showings, the FERC may waive these standards. Until further action by the FERC, any diesel cogeneration facility which was constructed on or after March 13, 1980, does not qualify. 18 C.F.R. Section 292.203(c). Also, a public utility, electric utility, and subsidiary of either, or a public utility holding company may not hold an equity interest in a qualifying cogeneration facility which equals more than 50 percent. 18 C.F.R. Sections 292.203, 292.206.

[3] As in the case of the qualifying cogeneration facility, the reader is referred to the final regulations promulgated under Section 201 of PURPA. A qualifying small power production facility must meet the same ownership test as required of the qualifying cogeneration facility. 18 C.F.R., Sections 292.203, 292.206. The qualifying small power production facility must have a design capacity of 80MW or less of production output. The design capacities of all facilities which use the same energy resource, are owned by the same person and are located within one mile of the facility for which qualification is sought are to be included in determining the 80 MW Limit. 18 C.F.R., Section 292.204. The primary energy source used by these facilties must be more than 50 percent biomass, waste, renewable resources or any combination thereof. _Id_. If oil, natural gas or coal is used as a supplementary fuel source, its use cannot exceed 25 percent

(Footnote Continued)

for the purchase and sale of the electric energy envisioned by Section 210 of PURPA.[4] The FERC rules were effective on and after March 20, 1980, and required certain action by State regulatory authorities, including this Commission, within twelve months of that date. This was accomplished by this Commission by its Order No. 81-214, dated March 20, 1981.

Essentially, in accordance with the rules promulgated by the FERC for the implementation of Section 210 of PURPA, an affected electric utility is required to purchase electric energy produced by qualifying facilities at a rate reflecting the cost that the purchasing utility can avoid as a result of obtaining energy and capacity from these sources, rather than generating an equivalent amount of energy itself or purchasing the energy or capacity from

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(Footnote 3 Continued)

of the total fuel input. Id. Hydroelectric facilities owned by the same person and located within a distance of one mile from another are considered at the same site only if they use water from the same impoundment. 18 C.F.R. Section 292.204.

4 See, 18 C.F.R. Part 292. See, FERC Docket No. RM 79-54. See, also, FERC Docket No. RM 79-55, Small Power Production and Cogeneration Facilities - Rates and Exemptions.

other suppliers.[5] In order to enable potential cogenerators and small power producers to estimate the avoided costs, the FERC's rules require affected electric utilities to furnish certain information to the appropriate regulatory authority relating to the present and future costs of energy and capacity on their respective systems.[6]

The promulgated rules also require the affected electric utilities to sell, upon request by a qualifying facility, supplementary, back-up, maintenance, and interruptible power services.[7] The rates for these services must be just, reasonable, in the public interest and must not discriminate against the qualifying facility.[8] The Commission may grant a

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[5] 18 C.F.R. Section 292.303. The requirement to pay the full avoided costs does not necessarily apply to cogeneration or small power production facilities whose construction commenced prior to November 9, 1978, nor is such requirement intended to supersede existing or future voluntary agreements between cogenerators or small power producers and an affected utility.

[6] The affected electric utilities subject to the jurisdiction of this Commission are Carolina Power & Light Company ("CP&L"), Duke Power Company ("Duke"), and South Carolina Electric & Gas Company ("SCE&G").

[7] 18 C.F.R. Section 292.305(b)1.

[8] 18 C.F.R. Section 292.305(a).

waiver of the obligation to make sales under certain conditions.[9]

Additionally, the rules exempt qualifying facilities from certain provisions of the Federal Power Act,[10] from the provisions of the Public Utility Holding Act of 1935 related to electric utilities, and from state laws regulating electric utility rates and financial organization.[11]

On September 29, 1980, the Commission issued its Order No. 80-539, in compliance with PURPA requiring data identified in the applicable Section of PURPA[12] to be filed no later than November 1, 1980. The docket file indicates each affected electric utility complied with said Order.

Pursuant to notice duly given in accordance with applicable provisions of law and with the Commission's Rules of Practice and Procedure, a public hearing was held on January 14, 1981, in

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[9] 18 C.F.R., Section 292.305(b)2 provides that the requirement of Section 292.305(b)1 may be waived when the State authority or the FERC finds, after proper notice and opportunity to be heard, that compliance with the requirement would (a) impair the affected electric utility's ability to give adequate service to the rest of its customers, or (b) place an undue burden on the affected electric utility.

[10] 18 C.F.R., Section 292.601.

[11] See, 18 C.F.R., Section 292.602.

[12] See, 18 C.F.R., Section 292.302(b).

order to receive testimony and evidence from interested parties relative to the implementation of Section 210 of PURPA.

On March 20, 1981, the Commission issued its Order No. 81-214, which inter alia, approved rate schedules and contract provisions to be offered by the utilities in South Carolina.

In February 1984 the Commission determined that a review of the small power production and cogeneration schedules and their implementation was appropriate. A notice of hearing was published and the hearing was scheduled to begin on May 30, 1984.

The South Carolina jurisdictional electric utilities made parties in this docket are Carolina Power & Light Company (hereinafter "CP&L"), Duke Power Company (hereinafter "Duke"), South Carolina Electric & Gas Company (hereinafter "SCE&G"). The following parties filed Petitions to Intervene and were accepted as intervenors in this proceeding. The Consumer Advocate, South Carolina Energy Users Committee (hereinafter "SCEUC"), Tuscarora Yarns, Inc., Southeastern Hydro-Power, Inc., Clifton Power Corporation, Stone Container Corporation, Union Camp Corporation, Hydro-Energy Association of the Carolinas, Inc., Aquenergy Systems, Inc., Hopewell Power Company, and Mr. Ronnie Powers. Additionally, John F. Clark, Director of the Governor's Office of Executive Policy and Programs, and Philip D. Lusk were Protestants in the proceedings.

On May 10, 1984, the Consumer Advocate and the SCEUC filed a joint motion for continuance to delay the hearing at least sixty

(60) days to allow additional time for analysis of data and preparation for the hearing. On May 17, 1984, the Commission issued Order No. 84-423 which rescheduled the hearing for September 12, 1984.

On August 27, 1984, the SCEUC filed a Motion to Recess the hearing in order to clarify the issues in controversy. On August 29, 1984, the Commission issued its Order No. 84-650 which continued the hearing and scheduled a conference to be held September 7, 1984 between the parties and the Commission Staff. Each of the parties agreed to submit by September 17 a statement of the issues and their position on those issues. Thereafter each party would respond to the other parties issues and the Commission would then determine those issues still in controversy. The parties and the Commission Staff held an additional pre-hearing conference on October 19, 1984 to discuss the Statement of Issues filed by each party.

The Commission feels that the conferences between the parties and the Commission Staff were helpful. Because of diverse interests of the parties, however, it was evident that all issues were not going to be resolved. Therefore, on November 5, 1984, the Commission issued Order No. 84-937 setting the hearing date on December 17, 1984 and requiring all parties to prefile testimony and exhibits by November 30, 1984. The public hearing was held beginning on December 17, 1984, to receive testimony and evidence from interested parties.

The following appeared and participated through counsel: Robert W. Kaylor, Esquire and William F. Austin, Esquire, appeared on behalf of CP&L; W. Edward Poe, Jr., Esquire and Ronald L. Gibson, Esquire appeared on behalf of Duke; Patricia T. Marcotsis, Esquire and H. Thomas Arthur, Esquire appeared on behalf of SCE&G; M. John Bowen, Jr., Esquire appeared on behalf of the SCEUC; Natalie J. Moore, Esquire appeared on behalf of the Consumer Advocate; Glenn J. Berger, Esquire appeared on behalf of Union Camp Corporation; Mitchell M. Willoughby, Esquire appeared on behalf of Clifton Power Corporation and Southeastern Hydro-Power, Inc.; Rex L. Carter, Esquire and Bradford W. Wyche, Esquire appeared on behalf of Aquenergy; and Marsha A. Ward, Esquire, represented the Commission and the Commission Staff.

II.

ISSUES

A. SCEUC'S RULES PROPOSAL

The Commission recognizes that the arrangements between affected electric utilities and qualifying facilities should achieve the objective of Section 210 of PURPA and the rules and regulations promulgated pursuant thereto. We further recognize that it may be in the public interest to allow the parties to negotiate certain of the arrangements in order to achieve such PURPA objectives.

SCEUC points out that neither Section 210 of PURPA, nor the regulations promulgated pursuant thereto, preclude affected regulated utilities and qualifying facilities from entering into voluntary negotiated agreements. However, many of the issues associated with qualifying facility transactions are complex and disputes may often arise between electric utilities and qualifying facilities. SCEUC notes in its testimony that Section 210 of PURPA, and the regulations promulgated pursuant thereto, provide for states to exercise authority regarding regulation of various aspects of qualifying facility transactions. SCEUC Witness Ross testified that rules and regulations assist qualifying facilities in dealing with a utility which is under state regulation. Witness Ross sponsored Hearing Exhibit No. 18 which proposed rules and regulations for the Commission to adopt.

The Commission has reviewed the proposed rules and regulations of SCEUC and is of the opinion that the FERC regulations, i.e., Small Power Production and Cogeneration Facilities; Regulations Implementing Section 210 of the Public Utilities Regulatory Policies Act (PURPA) of 1978, 18 C.F.R. Part 292, adequately provide guidelines for the Commission to follow. In fact, the rules proposed by SCEUC are similar to the FERC regulations. The Commission is of the opinion that it is not necessary to go through a lengthy rulemaking proceeding, as required by the Administrative Procedures Act (S.C. Code Ann. Section 1-23-10 et seq. (1983 Cum. Supp.), as the Commission deems the FERC regulations proper guidelines to apply when needed. Therefore the Commission finds that the proposal by

SCEUC to adopt rules and regulations as set forth in Hearing Exhibit No. 18 should be denied.

B. CAPACITY CREDIT DETERMINATION

Capacity credits are based on avoided cost savings resulting from not having to construct new power plants. All parties to the proceeding agreed that capacity credits act as an incentive to cogenerators and small power producers. Therefore, capacity credits carry out the intent of Section 210 of PURPA to encourage small power production and cogeneration.

Each electric utility proposed their method for determining the capacity credit. The qualifying facilities in each utility's service area presented their methodology for the computation of the capacity credit. The Commission reaffirms its position that the basis for payment to qualifying facilities should be the full avoided cost as determined for each separate utility. With that as a basis, the Commission will address each utility's proposed capacity credit determination individually.

(1) CP&L - CP&L proposed to continue using the cost of a new internal combustion (IC) turbine as the basis for the avoided capacity credit in its proposed rate schedule, Hearing Exhibit No. 1. Consumer Advocate Witness Rothschild, SCEUC Witness Ross, and Clifton Witness Marcus all suggested that alternative methodologies for the computation of capacity credits be considered. Their proposals centered around the use of a base load plant as the basis for the capacity credits. Aquenergy

Witness Walker agreed that the IC turbine methodology proposed by CP&L represented an acceptable method.

CP&L Witness King testified that economic theory supports IC turbine capacity cost coupled with incremental energy cost as being economically efficient and as providing a good long-run price signal, Section C, infra. CP&L also pointed out in its list of issues that the use of an IC turbine to calculate avoided capacity credits not only was consistent with economic theory but also provided results that were stable over time and were based on readily available data. While some of the methods presented by the Intervenors have merit, theoretically, they may not provide correct, long-run price signals to developers of QFs. The recommendations by other parties rely on choosing an avoided unit. The Commission is of the opinion that the IC turbine approach coupled with incremental energy cost, as calculated from PROMOD, Section C, infra., provides the most stable and most appropriate method while the results of other methods are subject to wide variations depending on the timing, size, and type of unit assumed to be avoided. Witness Marcus's testimony indicates that results using the total cost of CP&L's next planned, base load coal unit, Mayo 2, are approximately equal to the resulting CP&L's IC turbine incremental energy cost approach and gives the Commission further evidence that CP&L's proposal provides a reasonable total avoided cost estimate. Furthermore, the Commission takes judicial notice of prior orders in this docket and notes that the IC turbine method is not a new method but has consistently been used by all utilities under the Commission's jurisdiction.

The Commission has given careful consideration to the proposals made by all parties and has concluded that CP&L's proposed methodology provides the most reasonable estimate of CP&L's long-run, capacity-related avoided costs.

(2) Duke Power - Like CP&L, discussed above, Duke Power calculated its avoided capacity credit using the 1985 cost of a new IC turbine as its basis. Tr., Vol. 3, Fruend, pp. 90-91. Duke Power used the avoided capacity credit calculation in conjunction with the Company's avoided energy cost. Witness Fruend rationalized that it is appropriate to use the combustion turbine as the basis for the capacity credit when to the extent a qualifying facility increases its output, the highest increment of cost for energy on the Duke System is affected. Id. pp. 93-94.

The Intervenors recommended other methods of calculating the capacity credit. Clifton Power recommended basing the avoided capacity credit on Duke's Bad Creek plant and the Consumer Advocate sponsored a set 2.6 cents/KWH for capacity credit. Aquenergy did not object to Duke's use of the IC turbine, but did recommend certain adjustments to Duke's calculations. Most notably, Aquenergy asserted that Duke should pay the capacity credits on a twelve month basis rather than the eight on-peak months.

Based on the previous discussion concerning CP&L and the rationale for the Commission's conclusion thereto, the Commission concludes that Duke Power's proposed methodology is appropriate for capacity-related costs except that such capacity credits should be paid on a twelve month basis.

(3) SCE&G - Based on its contention that it is not in a construction phase of system development, SCE&G maintains that the establishment of additional generating capacity within its assigned territory through the development of cogeneration will not at this time enable SCE&G to avoid any capacity costs.

Union Camp contends that SCE&G has planned capacity additions which are currently avoidable, and that SCE&G should pay these avoidable capacity costs to qualifying facilities.

However, as Union Camp points out, the record in this proceeding does not indicate the full extent to which SCE&G is currently avoiding capacity costs. The Commission is mindful of its previous treatment of SCE&G's capacity credit the excess capacity SCE&G currently has on its system (See, Docket No. 83-307-E, Order No. 84-142 dated March 2, 1984), and the planned additions to its system in the early 1990's (Tr., Vol. 4, p. 4).

The Commission, after considering all the relevant facts, believes that at this time, the capacity credit for SCE&G should be zero. However, based on the testimony elicited at the hearing, the Commission herein will require SCE&G to provide updated avoided cost information for the Commission's further determination of an appropriate capacity credit payment for SCE&G. Such information should be filed one year from the date of this Order.

C. THIRTY MINUTE INCREMENT RULE

At the conclusion of the hearing on December 19, 1984, Aquenergy orally moved for an Order granting immediate relief from the so-called "30 minute increment rule" of Duke Power Company.

On January 18, 1985, the Commission granted Aquenergy's motion and ordered, on an interim basis, the "30 minute increment rule" be eliminated from Duke's proposed PP schedule and that any cogenerator or small power producer on Duke's system receive a capacity credit of 1.75 cents per KWH during on-peak hours of the eight on-peak months. Order No. 85-37 issued January 18, 1985.

The Commission herein amends the findings and conclusions of Order No. 85-37 with respect to the "30 minute increment rule" to pay a capacity credit on a per KWH basis during on-peak hours of all months of the year. *See*, Section B(2).

D. ENERGY CREDIT DETERMINATION

All the electric utilities proposed similar methods of determining their energy credits. Several Intervenors pointed out specific areas where they objected, but only SCEUC and Clifton Power proposed to match the type of energy that would have been produced by the avoided resources, *i.e.*, match the unit with capacity. However, the Commission based the capacity credits on IC turbines (See, Section B, supra.), thereby making the best "match" for such the incremental energy costs.

One common adjustment to the avoided energy cost that the Commission deems appropriate for all electric utilities to include is the .05 cents per KWH Electric Power Excise Tax the utilities avoid on energy purchased from qualifying facilities. The Commission is of the opinion that the .05 cents/KWH should be included in CP&L's, Duke Power's and SCE&G's energy credit calculation.

Since Intervenors voiced objections to certain portions of each utility's proposals these will be addressed separately as pertaining to that utility.

(1) CP&L - The Consumer Advocate's Witness Rothschild contended that CP&L had combined peaking capacity with base-load energy. Coal units are typically used on CP&L's system for load following, and the Commission therefore would expect to see such units pick up most of the 100 MW load increment used in the production cost modeling process which supports the avoided energy credits. The Commission notes that CP&L's Exhibit 1 shows avoided fuel costs in the range of 3.2 to 3.8 cents/KWH in the peak period. These costs are significantly higher than CP&L's coal costs which were stated to be in the 1.8 to 2.0 cents/KWH range. The higher costs used in the calculation of CP&L's avoided energy credits are undoubtedly the result of the operation of higher cost peaking units which typically operate a

small percentage of the time. They can represent a relatively higher percentage of the avoided energy cost because of the high fuel cost associated with IC turbines when compared to coal units. The avoided energy cost, as computed by CP&L, therefore contains significant cost components, particularly in the peak period, based on peaking sources of power. CP&L appropriately differentiated these costs by time period in recognition of the fact that avoided energy costs are relatively higher during peak periods than during off-peak periods. The Commission also notes that the 100 MW increment used by CP&L in the computation of avoided energy cost is consistent with Section 292.302 of FERC Order No. 69 which requires the reporting of utility avoided energy cost in increments of 100 MW.

The Commission finds CP&L's proposed energy credit calculation, modified to include the .05 cents/KWH Electric Power Excise Tax, to be appropriate for this proceeding.

(2) Duke Power - Duke's proposed energy credits are based on the projected 1985 system fuel and operating and maintenance cost savings resulting from the addition of 100 MW of QF capacity on the Duke system. Tr. III p. 89, Ex. 14. These figures were adjusted by a "loss adjustment factor" of 1.03093 to take into account avoided line losses.

Aquenergy, Clifton Power and Consumer Advocate contend the loss adjustment factor should be increased to reflect the fact that, according to Witness Osterberg, a qualifying facility typically does not experience any line loss between the transmission point and the distribution point. Tr. Vol. 5, p. 115. Witness Osterberg further testified that the typical line loss experienced between utility power plants and a customer ranges between seven to eight percent. Less line loss occurs at the transmission level. Id, p. 114. Using Duke Power's June 1982 PURPA 133 filing, Witness Osterberg recommended a marginal peak energy line loss factor of 1.073 at the transmission level and a marginal off-peak energy loss factor of 1.0505. Id., pp. 115-116.

Additionally, Witnesses Osterberg and Marcus took issue with Duke's omission of fuel inventory and working capital costs which would be avoided by a qualifying facility. Tr. Vol. 5, pp. 116-117. Both CP&L and SCE&G made these adjustments, and there is no reason to assume Duke would not be avoiding these same costs when buying power from qualifying facilities.

The Commission has considered the testimony of the Company and the Intervenors, and is of the opinion that the adjustments proposed by Witness Osterberg are fair and appropriate in the calculation of Duke's energy credit. Therefore, the Commission approves Duke's energy credit with the adjustments proposed by Witness Osterberg and with the Electric Power Excise Tax as discussed earlier, to be appropriate for this proceeding.

(3) SCE&G - SCE&G presented the testimony of Marion Hill, Manager of its Rate Department. Mr. Hill sponsored the energy

credit proposed by SCE&G which includes avoided energy costs plus adjustments for working capital, fuel inventory, and system loss factors. Tr., Vol. 3, Hill, pp. 121-122. Hearing Exhibit 15, Schedule MEH-2. The proposed energy credit is based on the results of its two production costing model PROMOD scenarios. Id. p. 122.

The Commission finds the proposed energy credits for SCE&G to be reasonable and appropriate, and adopts them for use herein with the addition of the .05 cents per KWH Electric Power Excise Tax.

E. LONG TERM CONTRACTS

One of the principal issues in this proceeding was whether the Commission should require electric utilities to offer QFs the option to enter into contracts containing long-term levelized rates. Long-term levelized rates are permitted, although not required, by FERC regulations under Section 210 of PURPA.

The electric utilities expressed several concerns with long-term levelized rates. Their witnesses testified that it is difficult to predict future inflation rates, fuel prices and energy demands; therefore, long-term levelized rates may eventually prove to be inaccurate. Tr. II p. 60. The utilities also cited the possibility that a QF may default after receiving the overpayments which naturally accrue during the early years of a long-term contract. Tr. II p. 61.

Conversely, witnesses for the various QFs testified that long-term levelized rates greatly impact their existence. Tr. V p. 133; Tr. VI pp. 95 and 219. Witness Walker explained that in the absence of contracts containing long-term levelized rates, Aquenergy has been able to obtain financing for its projects only by giving personal loan guarantees to its lenders. Tr., Vol. 5, pp. 78-79.

In this Commission's Order No. 81-214, issued March 20, 1981, in Docket No. 80-251-E, the affected electrical utilities were encouraged to negotiate with qualifying facilities to reach voluntary agreements for the purchase of electric energy. With some hesitancy, the Commission again believes that the electrical utilities and qualifying facilities should be encouraged to negotiate. The contract between CP&L and Stone Container Corporation convinces us that negotiations can result in fair agreements. The hesitance of the Commission in instructing negotiations comes from some of the testimony presented in this proceeding. For example, the so called "thirty-minute" rule of Duke was steadfastly held by Duke throughout negotiations even though the North Carolina Commission had rejected such a rule. We too have found such rule to be unreasonable and have gone to the additional step of granting extraordinary interim relief in this Docket. This indicates that perhaps more emphasis on good faith needs to be placed in the negotiations.

This Commission is mindful that PURPA's basic objective is to encourage conservation of energy and efficient use of energy resources through the development of cogeneration and small power production facilities in this State. We believe that the option of long-term contracts must be made available if this objective is to be achieved.

Indicative of the possibility of problems that may exist in the good faith negotiation of long-term contracts is the proposal by Clifton Power and Southeastern Hydro for the assessment of attorney's fees and witness' fees against an unreasonable position by a utility. Clifton Power and Southeastern Hydro propose that should a reasonable proposal be made by a qualifying facility and the proposal is unreasonably rejected by the utility, that the Commission could reserve the right to assess the cost of the complaint against the offending utility. Although the Commission does not at this time adopt such a stringent measure of assessing costs against an "unreasonable" party, the idea has merit and could be used by the Commission as a tool to encourage good faith negotiations between qualifying facilities and electric utilities if complaints are received by the Commission or Commission Staff indicating a lack of good faith negotiations by either party.

However, at this point in time, based on the concerns of the parties, the Commission will not mandate long-term contracts. The Commission urges voluntary negotiations of long-term contracts and points to the complaint procedure available through the Commission as a proper forum to resolve any disagreements.

F. INTERCONNECTION EQUIPMENT

Interconnection equipment refers to the equipment necessary to connect a QF to the electric utility system. This equipment consists of three basic components: (1) transformers; (2) breaker and protective relays; and (3) metering equipment. Tr. Vol. 3, p. 62.

Several Intervenors questioned utility interconnection policies; however, SCE&G's and CP&L's policies were not challenged. CP&L's interconnection policies for QFs are the same as for additional facilities which are installed at a retail customer's request to provide service over and above that which the utility would normally render. The Commission is aware that CP&L offers two options for the payment of investment as well as operation and maintenance expenses associated with such equipment. CP&L purchases, installs, and maintains the equipment under either option. In addition, Witness King stated that CP&L had been flexible in its specification of such equipment by working with QF developers to design a safe interconnection at a reasonable cost. No specific complaints were made against CP&L.

Under Duke's policy, the QF has the option to purchase, install and maintain the transformers at the QF's expense. The breaker and protective relays and the metering equipment on the other hand, <u>must</u> be purchased, installed and maintained by Duke;

QFs are prohibited from doing so. Id., p. 64. These items are purchased by Duke from Mill Power, its wholly owned subsidiary, and are assembled by Duke engineers. Id., p. 59. Duke only discloses to the QF the total cost of the interconnection equipment and charges the QF each year 20.4 percent of this amount for as long as the QF supplies power to the electric utility. Id., p. 66.

Several Intervenors interposed a number of objections to Duke's policy on interconnection. First, they objected to Duke's refusal to disclose a break-down of the cost of its equipment. Second, they objected to the never-ending 20.4 percent charge on the total cost of the equipment.

When asked questions as to why Duke Power had such policies and the rationale behind them, Duke's Witness Denton's general answer was that it was "Company policy." Tr., Vol. 3, pp. 58, 68, 70.

As a resolution to this issue Witness Mierek made the following proposal: (1) allow qualifying facilities to design, construct and maintain the facilities with no charges paid to the utility, or (2) require the utility to construct and maintain the interconnections. Tr. Vol. 6, p. 222. Pursuant to Witness Mierek's proposal, the particular design and detailed cost would be available to the qualifying facility to allow it to make the decision whether or not to construct the interconnection to standards itself or allow the utility to construct the interconnection. Id. Witness Walker proposed that Duke be required to provide the small power producer with a detailed interconnection bill which breaks out all the various components and their cost on the bill; the small power producer should be given the option of reimbursing Duke for the interconnection costs in an up-front lump sum or by making monthly payments for a specified period of time until the interconnection costs are paid off. Tr. Vol. 5, p. 58. Mr. Walker stated that the qualifying facility should have the right to pay the interconnection bill off rather than finance it forever at 20%. Id.

The Commission is aware that it must carefully balance the interests of the public and is charged by law to act in the public's interest. The Commission notes the testimony of CP&L Witness G. Wayne King in stating CP&L's policy which does not vary greatly from the proposals. In view of this testimony and the testimony of Witness Mierek and Walker, the Commission finds no rational basis for Duke's position on this issue. The Commission however finds that the affected utilities should be the one to set the standards and design of the equipment subject to review for reasonableness by the Commission.

Based on the foregoing, the Commission, in order to encourage the development of cogeneration and small power production, finds that each jurisdictional utility should provide a detailed price list of the necessary interconnection arrangement to each proposed qualifying facility. Additionally, such price list should be filed with the Commission for its review. All three electrical utilities must provide qualifying facilities the following options: (1) allowing the utility to install the interconnection facilities and pay the utility a reasonable return on those facilities, (2) paying the utility the up front capital cost and then paying a reasonable charge per month for the operation and maintenance of said equipment, and (3) the QF's installing and maintaining the interconnection facilities itself, exclusive of metering equipment which shall be provided by the electrical utility, at its own cost. Provided, however, that should option three be elected by the qualifying facility, the utility shall have the right to set reasonable standards and specifications for the interconnection arrangement and inspect such interconnection once completed to ascertain that their system shall remain safe and efficient. Such standards and operating and maintenance charges shall be subject to review as to their reasonableness upon complaint or on its own motion by the Commission.

G. WHEELING OF POWER

The term "wheeling" refers to the transmission of a QF's power by an electric utility, which otherwise would be obligated to purchase the power, to another electric utility with which it is interconnected, directly or indirectly. FERC has established regulations regarding the wheeling of power. Under these regulations, (1) the QF must agree to the wheeling of its production; (2) the electric utility to whom the production is wheeled must purchase the power as if the QF was supplying energy and capacity directly to such utility; and (3) the price paid by the utility to whom the QF production is wheeled must be adjusted to reflect line losses but may not include any charges for transmission. 18 C.F.R. Section 292.303(d).

Witness Mierek testified as to the importance of the wheeling issue to small power producers. Tr. Vol. 6, pp. 223-226. According to Witness Mierek, without wheeling, utilities are in a position to deny small power producers access to attractive markets for their generation and thereby discourage the development of alternative energy sources. Id., p. 223. We agree with Witness Mierek that the encouragement of the development of alternative energy sources is consistent with the goals of PURPA and consistent with the public interest. Witness Mierek gave an example of the benefits of wheeling. Id., 224. A hydro project may be uneconomical to build in the jurisdiction of one utility because of its rate levels, However, that same project may be feasible at the rate levels available from another utility . If wheeling were required or permitted, the project could go forward with the ratepayers of the other utility benefitting. In addition, the utility in whose jurisdiction the small power producer is located may benefit if its line loss is decreased as a result of wheeling, and small power production is encouraged in the process. Witness Mierek requested the Commission require each utility to wheel qualifying facility power to any other utility. See, Tr., Vol. 6, pp. 223-225. The Commission notes that FERC has asserted jurisdiction over the setting of rates for the wheeling of power generated by qualifying facilities where the system over which the power is wheeled is interconnected and capable of transmitting energy across a State boundary. However, the States retain jurisdiction over the issue of requiring a utility to wheel power. The Commission is not inclined to outright order a utility to wheel power in this proceeding. However, the Commission acknowledges that there are potential benefits from wheeling that could be enjoyed by the ratepayers in our State. The Commission hereby encourages the affected electrical utilities to work with qualifying facilities on a case-by-case basis as requests for wheeling arise. Where an agreement cannot be reached, the qualifying facilities are encouraged to present the issue for resolution to this Commission by way of a complaint proceeding. SCE&G, CP&L and Duke are hereby directed to negotiate with the qualifying facilities in good faith on this issue.

H. DUKE POWER CONTRACT TERMS

During the hearing Duke proposed that an additional paragraph be added to its standard Purchased Power Agreement. Proposed paragraph 8 provides that Duke's obligation to purchase power "is contingent upon the supplier's obtaining required approval from all regulatory bodies."

There was some concern expressed during cross-examination of Witness Price as to the proposed language in Paragraph 8 as shown on Price Exhibit 4, Hearing Exhibit No. 12. During cross-examination, Mr. Price stated that unless counsel objects, which counsel did not object, that he would not have a problem changing the language as set forth below. Tr. Vol. 3, p. 71. The original language could lead to confusion as to what approval is necessary. The language proposed by Mr. Wyche on cross-examination of Mr. Price and consented to by Mr. Price, removes any confusion without harming the affected electric utility. Therefore, the first sentence of Paragraph 8 on Duke's proposed contract is hereby modified to read as follows:

> The agreement is contingent upon the suppliers obtaining approval from all regulatory bodies required by law for the qualified facilities to operate and the parties hereto agree that performance under this agreement shall not commence unless and until such approvals are obtained.

Additionally, Duke's contract proposed that a QF must sell its generation to the utility in whose territory it was generated. This provision was objected to by several parties.

The Commission sees no reason for such a mandate to be part of the Duke Power contract. Such a condition could hamper the development of cogeneration. Based on the discussion of wheeling in Section G, supra., the Commission is of the opinion that whether a QF should be required to sell to a utility in whose territory it generates should be decided on a case-by-case basis.

I. CP&L'S PROPOSALS

CP&L proposed a variable two year avoided cost rate schedule for a period of five years for all QF's with capacity equal to or less than 5MW. Union Camp opposed CP&L's proposal on the basis that it is contrary to the FERC rules and that it treats QF's in a discriminatory manner.

There is no question that CP&L has treated the QF's in its territory in a fair and reasonable manner. This is evidenced by the encouragement QF developers have received under CP&L's past rates and practices and the satisfaction expressed by QF's with CP&L's practices during the course of the hearing.

The Commission disagrees with the contentions of Union Camp concerning CP&L's variable five year contract. The parties herein have been admonished to negotiate in good faith, and the complaint procedure before the Commission is available for any party believing it was prejudiced or unduly taken advantage of in the course of negotiations.

CP&L proposed to purchase capacity from QF's at different rates based on whether or not the QF is located within CP&L's service territory. Union Camp opposes CP&L's proposal. According to Union Camp, CP&L's proposal would be discriminatory in a wheeling situation. Under the FERC regulations a wheeling QF delivering power to CP&L is entitled to have its power purchased at the same rate as a QF within CP&L's service area. The Commission agrees with Union Camp's contention and denies that portion of CP&L's proposal that allows CP&L to purchase capacity from QF's at different rates based on whether or not the QF is in CP&L's service area.

J. COMMISSION REVIEW OF ALL CONTRACTS

In Order No. 81-214, each affected electrical utility was required to place in any proposed negotiated agreement, the following provisions:

> This agreement is subject to review by the South Carolina Public Service Commission upon complaint by either party, or pursuant to its own motion, and the terms herein may be modified in whole or in part or declared null and void by the South Carolina Public Service Commission.

This provision shall continue in effect and be placed in all future agreements. As in Order No. 81-214, the responsibility rests with the affected electrical utility to see that the above is inserted. Order No. 81-214 contained the following provision: "[i]n no case should tariffs be represented as a qualifying facility's sole contractual option." (Order No. 81-214, p. 10). The Commission hereby reiterates such instruction to affected electrical utilities. The leeway granted herein for negotiation is to allow negotiation in the interest of promoting cogeneration and small power production. The tariffs approved herein should not necessarily be considered the sole option available, but as guidelines to good faith negotiations. Negotiated contracts between an affected utility and a qualifying facility should upon execution be submitted to the Commission. The Commission will conduct a general review of such contracts to determine whether they comply with the provisions of this Order and with the intent of PURPA as we did in the Stone Container matter. If it appears that they do, such contracts will be accepted for filing with the Commission. The Commission may, on its own motion, conduct further, more detailed review of the contracts at that time by way of such hearings or other proceedings as it may order.

K. SUPPLEMENTARY, BACK-UP, AND MAINTENANCE POWER

The Commission recognizes that a qualifying facility has a potential need for three types of service from an electric utility. These types of services are supplementary power, back-up power, and maintenance power. SCEUC Witness Ross defined the three types of services in his testimony as follows:

> 1. Supplementary Power--power which is defined as the electric energy or capacity supplied by an electric utility, regularly used by a qualifying facility in addition to that which the facility generates itself.
>
> 2. Back-Up Power--power defined as the electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the facility.
>
> 3. Maintenance Power--power defined as the electric energy or capacity supplied by an electric utility during scheduled outages of the qualifying facility. (Tr. Vol. 4, Ross, p. 39)

SCEUC presented testimony supporting the position that supplementary service should be supplied to a customer under the utilities regular rate schedule which would apply if that customer were a non-generating customer. SCEUC argued that a customer purchasing supplementary power should not have to pay more for his supplementary power than he would pay for that power if he were not a self-generator. SCEUC also proposed that each utility file tariffs that provide flexible back-up service and maintenance service to encourage QF development. SCEUC made several recommendations as to the terms and conditions of the utilities' tariffs.

The Commission believes it is appropriate for the utilities to offer rates for supplementary, back-up, and maintenance service to QF's. Therefore, SCE&G, CP&L, and Duke are instructed to file proposed tariffs offering supplementary, back-up, and maintenance service to QF's in their next general rate filing for the Commission's consideration. At that time, it would be appropriate for SCEUC or any QF to submit its recommendations and proposals for such offerings.

L. PROMOTION OF COGENERATION

Several of the Intervenors indicated in their testimony that QF development activity in South Carolina is being hampered by the practices and policies of the utilities. On the other hand, the utilities are reluctant to wholeheartedly accept the concept of cogeneration for fear of burdening their ratepaying customers.

This Commission believes that the goals of PURPA should be encouraged. Cogeneration and small power production offer benefits to South Carolina ratepayers when practiced in a responsible manner by the QF's and dealt with fairly by the utilities. The Commission's actions in the implementation of PURPA in South Carolina (Order No. 81-214, supra.) and our actions herein are designed to encourage cogeneration and small power production in South Carolina.

M. RATES

Based on the approved methodologies for calculating each utility's capacity credit and energy credit, the rates as filed by the electric utilities with the modifications as made herein are approved. Aquenergy requested that capacity payments by Duke Power be paid on a per KWH basis effective May 20, 1984. At that time, however, both Aquenergy and Duke Power were operating under Commission approved rates which had previously been found reasonable. The Commission did, however, grant Aquenergy's request for interim relief when it came to the Commission's attention during the course of the proceeding the hardship the 30 minute increment rule was working on the QF's in Duke's territory. The Commission cannot retroactively set rates. Such rates should be applied prospectively, not retroactively and will be effective as of the date of this Order.

III.

FINDINGS AND CONCLUSIONS

Based on a thorough review of the record herein and on the matters officially noticed, and on the foregoing discussion, the Commission finds and concludes as follows:

1. That the proposal that the Commission adopt rules and regulations as proposed by SCEUC should be denied and that FERC regulations provide proper guidelines to apply at the present time.

2. That it is appropriate for CP&L and Duke Power to base their avoided capacity credit on the cost of an IC turbine, with Duke Power paying such credits on a twelve month basis.

3. That SCE&G Company should not pay a capacity credit at this time, but must provide the Commission updated cost information one year from the date of this Order for the Commission's further determination of an appropriate capacity credit.

4. That it is appropriate for CP&L and SCE&G to base their proposed energy credit on incremental energy costs as filed with the .05 cents/KWH Electric Power Excise Tax to be included; that it is appropriate for Duke Power to base its proposed energy credit on incremental energy costs as filed, but to include a marginal peak energy line loss factor of 1.073 and a marginal off-peak energy loss factor of 1.0505, fuel inventory and working capital costs, and the .05 cents/KWH Electric Power Excise Tax.

5. That Order No. 85-37 issued in the instant Docket on January 18, 1985 should be amended with respect to the abolition of Duke Power Company's 30 minute increment rule as modified herein.

6. That long term rates will not be mandated by the Commission, but CP&L, Duke, SCE&G, and existing and future QF's are encouraged to negotiate in good faith to reach voluntary agreements for the purchase of electric energy.

7. That each jurisdictional electric utility should provide a detailed price list of the necessary interconnection arrangement to each proposed QF and such price list should be filed with the Commission for its review. The price list must provide QF's with the following options: a) allowing the utility to install the interconnection facilities and pay the utility a reasonable return on those facilities, b) paying the utility the up front capital cost and then paying a reasonable charge per month for the operation and maintenance of said equipment and c) the QF's being allowed to install and maintain the interconnection facilities itself, excluding metering equipment which shall be provided by the utility, at its own cost.

8. That the issue as to the requirements for the electrical utilities to wheel power shall be reserved by the Commission to be addressed on a case-by-case basis as requests for wheeling arise.

9. That Duke Power Company's proposed contract should be modified to permit a QF to sell its generation to a utility other

than the one in whose territory the QF is located, with the necessary Commission approval; and Paragraph 8 of Duke's Purchased Power Agreement should be modified to read as follows:

> The agreement is contingent upon the suppliers obtaining approval from all regulatory bodies required by law for the qualified facilities to operate and the parties hereto agree that performance under this agreement shall not commence unless and until such approvals are obtained.

10. That CP&L's proposed variable five year avoided cost contract with rates subject to review by this Commission each two years should be approved, but denies that portion of CP&L's proposal that allows CP&L to purchase capacity from QF's at different rates based on whether or not the QF is in CP&L's service area.

11. That in order to assure that each party to the contract is aware of the Commission's safeguards, each negotiated agreement entered into by the affected electrical utility and a qualifying facility should contain the following provision:

> This agreement is subject to review by the South Carolina Public Service Commission upon complaint by either party, or pursuant to its own motion, and the terms herein may be modified in whole or in part or declared null and void by the South Carolina Public Service Commission.

The responsibility rests with the affected electric utility to see that the above is inserted.

12. That in order to perform its regulatory responsibilities, and to provide the recommended safeguards, the Commission

finds that negotiated agreements should, upon execution, be submitted to the Commission for the Commission's review to determine whether the terms comply with the provisions of this Order and with the intent of PURPA so that the agreement may be accepted for filing.

13. That each jurisdictional electric utility should offer rates for supplementary, back-up and maintenance service to QF's and such proposed tariffs should be submitted in the utility's next general rate filing for the Commission's consideration.

14. That the Commission's actions herein are designed to encourage cogeneration and small power production in South Carolina.

15. That the rates as approved herein are effective as of the date of the Order and each utility should file revised rate schedules reflecting the Commission's findings within ten (10) days.

IT IS THEREFORE ORDERED:

1. That the proposal that the Commission adopt rules and regulations as proposed by SCEUC be, and hereby is denied.

2. That it is appropriate for CP&L and Duke Power to base their avoided capacity credit on the cost of an IC turbine, with both companies paying such credits on a twelve month basis.

3. That SCE&G Company is not required to pay a capacity credit to prospective QFs at this time, but shall provide the Commission updated cost information one year from the date of

this Order for the Commission's further determination of an appropriate capacity credit.

4. That it is appropriate for CP&L and SCE&G to base their proposed energy credit on incremental energy costs as filed with the .05 cents/KWH Electric Power Excise Tax to be included; that it is appropriate for Duke Power to base its proposed energy credit on incremental energy costs as filed, but to include a marginal peak energy line loss factor of 1.073 and a marginal off-peak energy loss factor of 1.0505, fuel inventory and working capital costs, and the .05 cents/KWH Electric Power Excise Tax.

5. That Order No. 85-37 issued in the instant Docket on January 18, 1985 be, and hereby is, amended as discussed herein.

6. That long term rates shall not be mandated by the Commission, but CP&L, Duke, SCE&G, and existing and future QF's are encouraged to negotiate in good faith to reach voluntary agreements for the purchase of electric energy.

7. That each jurisdictional electric utility shall provide a detailed price list of the necessary interconnection equipment to each proposed QF and such price list shall be filed with the Commission for its review. The price list must provide QF's with the following options: a) allowing the utility to install the interconnection facilities and pay the utility a reasonable return on those facilities, b) paying the utility the up front capital cost and then paying a reasonable charge per month for the operation and maintenance of said equipment and c) the QF's

being allowed to install and maintain the interconnec- tion facilities itself, excluding metering equipment shall be provided by the utility, at its own cost.

8. That the issue as to the requirements for the electrical utilities to wheel power shall be reserved by the Commission to be addressed on a case-by-case basis as requests for wheeling arise.

9. That Duke Power Company's proposed contract be, and hereby is, modified to permit a QF to sell its generation to a utility other than the one in whose territory the QF is located, with the necessary Commission approval; and Paragraph 8 of Duke's Purchased Power Agreement shall be modified to read as follows:

> The agreement is contingent upon the suppliers obtaining approval from all regulatory bodies required by law for the qualified facilities to operate and the parties hereto agree that performance under this agreement shall not commence unless and until such approvals are obtained.

10. That CP&L's proposed variable five year avoided cost contract with rates subject to review by this Commission each two years be, and hereby is, approved, but that portion of CP&L's proposal that allows CP&L to purchase capacity from QF's at different rates based on whether or not the QF is in CP&L's service area, is hereby denied.

11. That in order to assure that each party to the contract is aware of the Commission's safeguards, each negotiated

agreement entered into by the affected electrical utility and a qualifying facility shall contain the following provision:

> This agreement is subject to review by the South Carolina Public Service Commission upon complaint by either party, or pursuant to its own motion, and the terms herein may be modified in whole or in part or declared null and void by the South Carolina Public Service Commission.

The responsibility rests with the affected electric utility to see that the above is inserted.

12. That in order to perform its regulatory responsibilities, and to provide the recommended safeguards, the Commission finds that negotiated agreements shall, upon execution, be submitted to the Commission for the Commission's review to determine whether the terms comply with the provisions of this Order and with the intent of PURPA so that the agreement may be accepted for filing.

13. That each jurisdictional electric utility shall offer rates for supplementary, back-up and maintenance service to QF's and that such proposed tariffs should be submitted in the utility's next general rate filing for the Commission's consideration.

14. That the Commission's actions herein are designed to encourage cogeneration and small power production in South Carolina.

15. That the rates as approved herein are effective as of

the date of the Order and each utility shall file revised rate schedules reflecting the Commission's findings within ten (10) days.

BY ORDER OF THE COMMISSION:

Cecil A. Bowers
Vice Chairman

ATTEST:

James H. Stille
Executive Director

(SEAL)